ANREV

Building on big data: How real estate can harness the power of analytics   March 2018

Big data is having a seismic impact on all industries and aspects of business operations, and real estate is no exception. The notion that data has value and is the "new oil" is changing the way real estate professionals approach asset management and becoming a leading factor in decision making processes.

What is big data?

Big data refers to the huge volume of information generated by the relentless improvement in computer processing, storage and machine learning. Data includes information of any type and from any source, and is often unstructured, such as Google search terms, social media user data, transport and transaction data. It can take the form of numbers, images, traffic patterns and heat maps, and often cannot be analysed with traditional tools.

In the real estate sector, the proliferation of Internet of Things (IoT) sensors in commercial buildings is helping the industry generate large swathes of data on a real time basis. According to Deloitte, the number of commercial real estate IoT sensors will increase to 1.3 billion by 2020.

While most data collected relates to energy performance and space usage, a deeper analysis could potentially help landlords formulate strategies in areas such as energy cost savings and people flow.

Why is big data important?

Whether you are a traditional business or a digital upstart, every company collects data. Examples include data relating to sales, expenses, performance, trends and competitive analysis. Much of this data is static and stored in spreadsheets. However, as companies digitise systems and processes, data sets are expanding and becoming easier to access.

Big data represents an opportunity for real estate professionals to consolidate a large amount of data and create meaningful information from it. This will enable them to better understand large volumes of previously under analysed data, or cross-reference divergent data sets, with the hope of gaining business insights and improved decision making.

Key areas where big data can add value in real estate include improving the availability, awareness and usage of amenities; developing transport efficiency and convenience; enhancing existing services and enabling new ones; providing improved information through greater accuracy and more comprehensive contexts to enhance decision making; and enabling artificial intelligence services to further automate tasks and provide improved analytics.

The significance of big data is that it allows businesses to create a unified view. There will no longer be disparate sets of information; companies will be able to combine everything they know and understand their operations, assets and business from every angle.

How can the real estate industry harness big data?

Digital services fuelled by big data are set to be a major differentiator for cities, communities and properties over the next decade. As returns on real estate investment come under greater pressure, possessing quality data will be a key differentiator for asset managers.

The real estate industry has long been based on data such as sales results, occupancy statistics, leasing benchmarks and visitation numbers. With asset owners and managers already sitting on a huge amount of existing data, the challenge isn't so much in collecting the data, but in putting it together in the right format for a more comprehensive analysis (Figure 1).
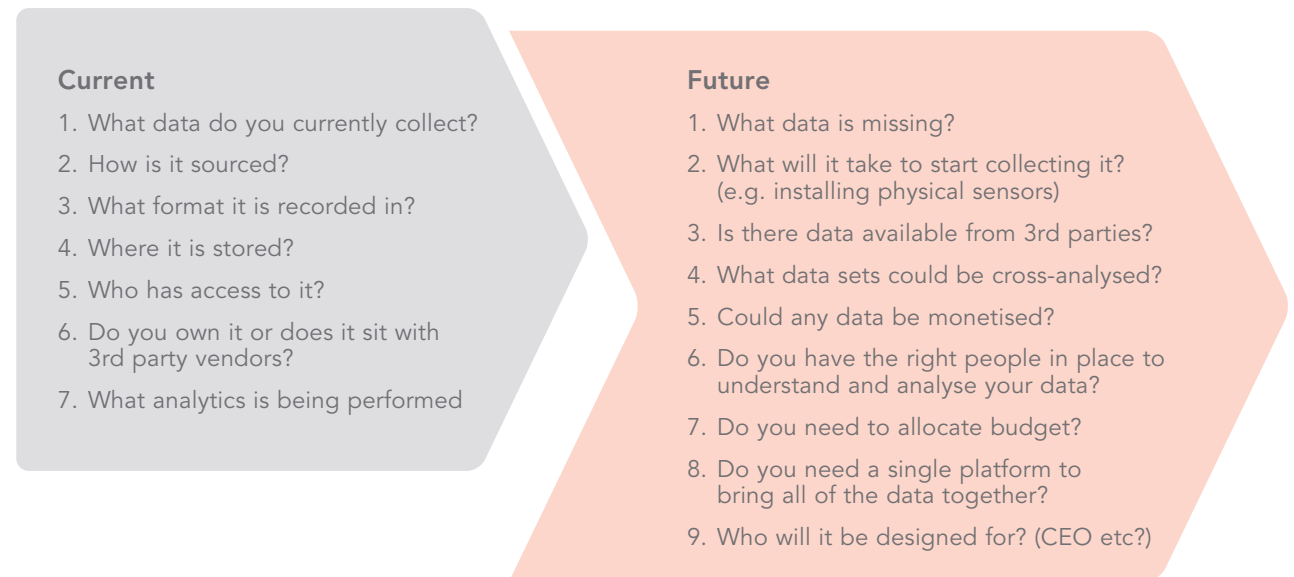
Figure 1: Examples of real estate big data
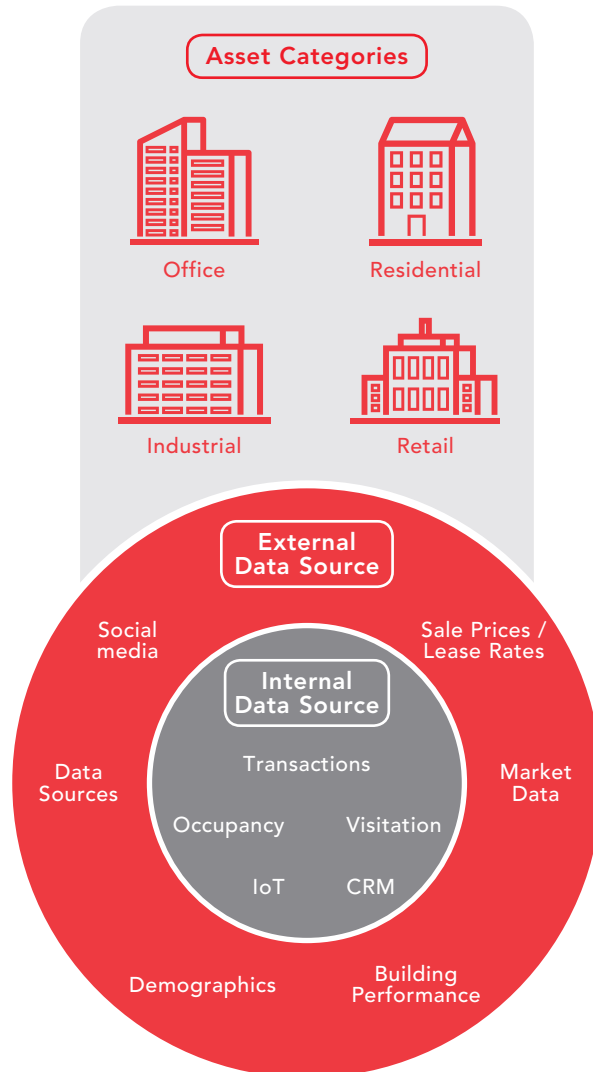
What should real estate professionals do next?

Big data should be approached as a core pillar of long term business strategy and must begin with companies identifying the key business questions data could help them answer. Once identified, they must then complete a series of steps to understand where they are and where they need to go (Figure 2).

Figure 2: Big data roadmap

Current

1. What data do you currently collect?
2. How is it sourced?
3. What format it is recorded in?
4. Where it is stored?
5. Who has access to it?
6. Do you own it or does it sit with 3rd party vendors?
7. What analytics is being performed

Future

1. What data is missing?
2. What will it take to start collecting it? (e.g. installing physical sensors)
3. Is there data available from 3rd parties?
4. What data sets could be cross-analysed?
5. Could any data be monetised?
6. Do you have the right people in place to understand and analyse your data?
7. Do you need to allocate budget?
8. Do you need a single platform to bring all of the data together?
9. Who will it be designed for? (CEO etc?)

It is critical that big data be sourced and combined with multiple datasets and massaged with more advanced analytical skills to deliver deeper insights and better predictive power for the future. Only then will companies be able to harness the power of big data to make informed and strategic decisions, rather than decisions based on guesswork or historical best practices.

If members have any questions, or require a more detailed explanation of any of the points referenced in this note, please contact the ANREV Technology and Innovation Working Group at the following e-mail address: wg-tech-and-innov@anrev.org

We would also be keen to hear members' experiences of big data, and/or their views on how this technology will impact the industry in the coming years.